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Patent Law of the United States and the United Kingdom: A Comparison

INTRODUCTION

In the past several decades, there has been an unprecedented expansion in world-wide technology. In all areas of science, inventions are becoming more complex and more numerous and are spreading more rapidly across national boundaries.¹ The purpose of the patent system is to maximize this flow of new technology to the public.² To do so, it must be able to deal effectively with the ever-increasing number of inventions, and at the same time, maximize the innovation process itself.

This comment will discuss and compare several aspects of the United States and the British patenting processes. The effectiveness of the two systems in fostering the policies underlying the respective patent systems will be analyzed. The comment is divided into four parts. Part I provides a brief summary of the policies behind patent law. Part II focuses on the development of a uniform patent system in Europe. It discusses the necessity for such a system and the position of the British Parliament with regard to a uniform system. Part III discusses the patent systems' policies toward the employer and the employee.³ Part IV examines and compares three areas of the United States and British patent process: (a) Priority of Invention: First to Invent v. First to File; (b) Patent Filing Procedures: Getting Through the Patent Office; (c) Patent Term: A Key to Expediting Technology and Stimulating Invention Incentives.

PART I: PATENT LAW POLICY

Two policies underlie the United States and British patent law

1. Michaels, *The British Patents Act of 1977*, 13 INT'L LAW. 667, 668 (1979) [hereinafter cited as Michaels]; Bowen, *The Changing Patent Scene*, in PATENTS ACT 1977: QUEEN MARY COLLEGE PATENT CONFERENCE PAPERS 9 (M. Vitoria ed. 1978) [hereinafter cited as *Changing Patent Scene*].

2. C. LEES, PATENT PROTECTION: THE INVENTOR AND HIS PATENT 11 (1965) [hereinafter cited as LEES].

3. "[A] significant amount of the creative and inventive work done in the technological area . . . stems from the employed rather than the independent inventor." F. NUEMEYER, THE EMPLOYED INVENTOR IN THE UNITED STATES 30 (1971) [hereinafter cited as NUEMEYER].

systems. One policy requires rapid disclosure of inventions to the public.⁴ Only the inventor "who gives the public the benefit of the knowledge of his invention" is entitled to a patent.⁵ A patent gives an inventor a right to exclude others from making or using his invention as a quid pro quo for the inventor's disclosure.⁶ However, disclosure is not sufficient. The inventor who delays making his invention available to the public forfeits any rights he may have had to a patent.⁷

The second policy underlying patents is to stimulate invention.⁸ This policy dates back to the genesis of the British patent law system. The English Crown granted patents to stimulate new trade and industry.⁹ British courts have reaffirmed this policy throughout the history of patent law.¹⁰ In the United States, Congress derives its power to grant inventors an exclusive right "[t]o promote the Progress of Science and of useful Arts" from article 1, section 8, clause 8 of the United States Constitution.¹¹ Since the Founding Fathers drafted this provision,¹² United States courts have determined that

4. *Scott Paper Co. v. Marcalus Mfg. Co.*, 326 U.S. 249, 255 (1945). *See also* *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480-81 (1974); *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 607 (1950); *United States v. Dubilier Condensor Corp.*, 289 U.S. 178, 186-87 (1932). These cases held that a patent grants a 17 year monopoly to the inventor after which time the invention enures to the public. *See* *Re Chevron Research Company's Application* [1975] F.S.R. 1 (1974); LEES, *supra* note 2, at 10-12.

5. *Mason v. Hepburn*, 13 App. D.C. 86, 96 (1898); *Young v. Dworkin*, 489 F.2d 1277, 1280 (C.C.P.A. 1974); *Kendall v. Winsor*, 62 U.S. (21 How.) 322, 327-28 (1858). *See* *Bristol-Myers Co. v. Beecham Group Ltd.* 1974 A.C. 646, 680-81 (1973); LEES, *supra* note 2, at 10.

6. Dratler, *Incentives for People: The Forgotten Purpose of the Patent System*, 16 HARV. J. ON LEGIS. 129, 135 (1979) [hereinafter cited as *Forgotten Purpose*]. *Cf.* *Plastic Textile Accessories Ltd.'s Patent*, 1975 R.P.D. & T.M. Cas. 372, 374 (Ch. 1972); 35 HALSBURY'S LAWS OF ENGLAND para. 301 (4th ed. 1981) [hereinafter cited as HALSBURY'S].

7. *Young v. Dworkin*, 489 F.2d 1277, 1280-81 (C.C.P.A. 1974); *Thomson v. Weston*, 19 App. D.C. 373, 381 (1902). *See* MEINHARDT, INVENTIONS, PATENTS AND TRADE MARKS 12 (1971) [hereinafter cited as MEINHARDT].

8. *Lever Bros. Co. v. Procter & Gamble Mfg. Co.*, 139 F.2d 633, 639 (4th Cir. 1943); *The Wellcome Foundation Patent*, 1977 R.P.D. & T.M. Cas. 468, 469 (Ch. 1976); *David Kahn Inc. v. Conway Stewart & Co.*, 1974 R.P.D. & T.M. Cas. 279, 308 (Ch.); HALSBURY'S, *supra* note 6, at para. 301.

9. F. VAUGHAN, THE UNITED STATES PATENT SYSTEM 14 (1956) [hereinafter cited as VAUGHAN]; HALSBURY'S, *supra* note 6, at para. 305.

10. *Patchett's Patent*, 1967 R.P.D. & T.M. Cas. 237, 251 (C.A.); *Aspro-Nicholas Ltd's Design Application*, 1974 R.P.D. & T.M. Cas. 645, 649-50 (Registered Designs Appeal Tribunal).

11. U.S. CONST. art. I, § 8, cl. 8. "To promote the Progress of Science and the useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."

12. *See* VI WRITINGS OF THOMAS JEFFERSON, 180-81 (Washington ed. 1853), *quoted in* *Graham v. John Deere Co.*, 383 U.S. 1, 8-9 n.2 (1966).

this provision grants Congress the power to create incentives to stimulate future individual efforts in inventing.¹³

In the United States and British economic systems, the patentee's exclusive right directly competes with the policy of free competition.¹⁴ Against the policy to stimulate invention there exists a countervailing policy which mandates restriction of monopolies. Since a patent gives the inventor a period of exclusive use, this policy restricts the patent grant.¹⁵ The United States Supreme Court affirmed this policy in *Graham v. John Deere Co.*, stating that Congress must not "enlarge the patent monopoly without regard to the innovation, advancement or social benefit gained thereby."¹⁶ The British courts have similarly recognized this constraint in granting patents.¹⁷ The United States and United Kingdom have incorporated procedural and substantive requirements into their respective patent systems which are designed to assure that the patent monopolistic right is only granted when strict criteria are met.¹⁸

PART II: THE NEW BRITISH PATENT SYSTEM

In 1977, the British Parliament promulgated the Patents Act, 1977.¹⁹ This Act is the most recent expression of British statutory

13. *Goldstein v. California*, 412 U.S. 546, 555 (1973); *Graham v. John Deere Co.*, 383 U.S. 1, 9 (1966); see also *Bauer v. O'Donnell*, 229 U.S. 1, 10 (1913); *Mitchell v. Tilghman*, 86 U.S. (1 Wall.) 287, 418 (1874); *Kendall v. Winsor*, 62 U.S. (1 How.) 322, 328 (1859).

14. See LEES, *supra* note 2, at 14-15.

15. *Graham v. John Deere Co.*, 383 U.S. 1, 7-8, 10-11 (1966); HALSBURY'S, *supra* note 6, at para. 301; *Farbenfabriken Bayer A.G. Application*, 1973 R.P.D. & T.M. Cas. 698, 703 (Patents Appeal Tribunal); see also Statute of Monopolies, 1623, 21 Jac. 1, ch. 3 §§ 1, 6 (voided the granting of all monopolies except for patents for inventions).

16. *Graham v. John Deere Co.*, 383 U.S. 1, 6 (1966). See generally MEINHARDT, INVENTIONS, PATENTS AND MONOPOLY 30-35 (1946).

17. *Letraset Ltd. v. Rexel Ltd.*, 1974 R.P.D. & T.M. Cas. 175, 196-97 (Ch. 1973); see MEINHARDT, *supra* note 7, at 21, citing *Case of the Clothworkers of Ipswick*, Godbolt 252 (1615).

18. See *Graham v. John Deere Co.*, 383 U.S. 1, 9, 17-18 (1966); *General Revision of the Patent Laws: Hearings Before Subcomm. No. 3 of the House Comm. on the Judiciary on H.R. 5924, H.R. 13951, and Related Bills*, 90th Cong., 1st Sess. 173 (1967) (statement of Judge Rifkind, Co-chairman of the President's Commission on the Patent System) [hereinafter cited as *Hearings on Patent Law Reform*]. Inventions in the United States must pass the tests of "utility," "novelty" and "nonobviousness" to be patentable per 35 U.S.C. §§ 101, 102 and 103 respectively, and in the United Kingdom under §§ 4(1), 2, and 3 of the Patents Act, 1977, *infra* note 19.

19. Patents Act, 1977, ch. 37 [hereinafter cited as Patents Act, 1977]. The Act received royal assent on July 29, 1977 and went into effect June 1, 1979. M. Vitoria, *Introduction to PATENTS ACT 1977: QUEEN MARY COLLEGE PATENT CONFERENCE PAPERS 3* (M. Vitoria ed. 1978) [hereinafter cited as Vitoria].

patent law.²⁰ The purpose of the Act is threefold:

- (a) it codifies much of the prior British patent law;²¹
- (b) it modernizes several areas of British patent law such as employer-employee inventions, patent filing procedures, and patent fee payments;²² and
- (c) it unifies British patent law with that of other European countries.²³

This section of the comment discusses the reasons why a unified patent system developed in Europe and the approach of the Patents Act, 1977 to the European patent system.

As a natural response to the rapid expansion of international trade over the last two decades, European countries have become export-conscious. As a result, European patentees seek protection in more and more countries to fully exploit the market for their inventions. Until recently, the European patentee had to file patent applications in each country in which he desired patent protection. The patent rules and procedures in each country differed. Thus, an international patentee was compelled to incur undue expense, time, and effort to secure a patent in each country he desired patent protection. Each country's patent office had to individually analyze the international patentee's application which, of course, resulted in duplication of effort. Thus, patentee and the patent offices of the European nations sought a more efficient method for obtaining patent

20. The Patents Act, 1957, 5 & 6 Eliz. 2, ch. 13, and the Patents Act, 1949, 12, 13 & 14 Geo. 6, ch. 87 preceded the Patents Act, 1977.

21. Vitoria, *supra* note 19, at 4.

22. *Id.* at 3-5. The main changes in the British patent law system by the Patents Act, 1977 are:

- (a) a statutory definition of "infringement" is introduced and the class of infringing acts has been widened and now includes so-called contributory infringement;
- (b) there is no longer opposition before grant;
- (c) the grounds for revocation have been narrowed; in particular, prior claiming, false suggestion, lack of utility and secret prior use are no longer grounds of revocation;
- (d) provision is made for "compensation" for employee-inventions whose inventions are outstandingly successful;
- (e) there are no longer special provisions for compulsory licenses for food and medicines;
- (f) the term of a patent is twenty years, with no provision for extension;
- (g) provisional specifications have been abolished, the old system of provisional patenting being replaced by a comparable provision for claiming priority from earlier applications.

HALSBURY'S, *supra* note 6, at para. 308.

23. See *infra* notes 31, 45-51 and accompanying text.

protection.²⁴

Before the Patents Act, 1977, the European nations had four major international agreements which formed a quasi-European patent system:

- (1) The Strasbourg Convention of 1963;²⁵
- (2) The Patent Cooperation Treaty of 1970;²⁶
- (3) European Patent Convention of 1973;²⁷ and
- (4) Community Patent Convention of 1975.²⁸

24. R. BOWEN, PATENTS ACT OF 1977 at 9 (1978) [hereinafter cited as R. BOWEN]. The United States faced a similar dilemma in its history. The colonists brought from England the practice of granting patents. Each of the thirteen colonies granted patents independently of each other. This arrangement resulted in conflict, confusion and uncertainty in the colonial industrial society. Desirability for a national patent system grew. Cognizant of this problem, the Founding Fathers provided for a national patent system in the United States Constitution (*see supra* note 11, for this provision). VAUGHAN, *supra* note 9, at 15-18.

25. Convention on the Unification of Certain Points of Substantive Law on Patents for Invention, Nov. 27, 1963, Europ. T.S. No. 47 (never entered into force) [hereinafter cited as Strasbourg Convention].

26. Patent Cooperation Treaty and Annexed Implementing Regulations, Jun. 19-Dec. 31, 1977, T.I.A.S. No. 8733, 1978 Gr. Brit. T.S. No. 78 (cmd. 7340) (*entered into force* Jan. 24, 1978) [hereinafter cited as PCT]. The objective of the PCT was to provide developing countries with a solution to the problem of setting up and using a patent system to suit their industrial objectives. It is difficult, if not impossible for many countries to secure highly trained technicians and sufficient scientific documentation which is essential to a patent office. The PCT resolves this problem by providing for a states of art search and examination for patentability by an Industrial Authority, which will provide this information to the developing country. The developing country can grant patents with confidence that their inventors and industry will be protected adequately, thus stimulating technological growth in the country. European Patent Office, the European Patent Organisation and Development Co-operation (Information Brochure Feb. 1980) [hereinafter cited as European Patent Organisation]. The European Patent Office, together with a limited number of major national patent offices (e.g., United States, Soviet Union and Japan) function as the International Searching and Examining Authority under the PCT. European Patent Office, The European Patent Office 18 (2d ed. 1981) (Information Brochure) [hereinafter cited as European Patent Office].

27. Convention on the Grant of European Patents, Oct. 5, 1973, 1978 Gr. Brit. T.S. No. 20 (Cmd. 7090) [hereinafter cited as European Patent Convention]. The signatories were: Austria, Belgium, Denmark, France, the Federal Republic of Germany, Greece, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, the Netherlands, Norway, Sweden, Switzerland and the United Kingdom. HAERTEL, EUROPEAN PATENT CONVENTION 4 n.2 (V. Vossius trans. 1980) [hereinafter cited as HAERTEL]. Finland, Spain, Portugal, Turkey and Yugoslavia refrained from signing the Convention, but not because they rejected it. It is therefore possible that all or some of these countries will accede at some later date. *Id.* at 4.

28. Convention for the European Patent for the Common Market, Dec. 15, 1975, 17 *Official Journal of the European Patent Office* No. L17 [hereinafter cited as the Community Patent Convention]. The Convention makes it possible to obtain a single Community patent on the basis of a common system of law. This patent will have equal effect in all Common Market states, and only be granted, transferred, revoked or allowed to lapse for all of these states as a whole. R. SINGER, THE NEW EUROPEAN PATENT SYSTEM 107-08 (D. Devons

The Patents Act, 1977 aligns the British domestic patent law with the requirements of the Strasbourg Convention;²⁹ it provides procedural and substantive measures to make the prior European agreements operative.³⁰ The Patents Act, 1977 delineated three types of patents:

- (a) the British domestic patent;
- (b) the European patent (U.K.);³¹ and
- (c) the Community Patent.³²

The British patentee obtains the British domestic patent through the British Patent Office. In granting this patent, the patent office is guided by the provisions in Part I of the Patents Act, 1977.³³ The domestic patent affords the British patentee protection only within the United Kingdom.³⁴

Any patentee who desires protection for his inventions in the United Kingdom can obtain a "European Patent (U.K.);" which categorically designates the United Kingdom as a place in which the

trans. 1980) [hereinafter cited as SINGER]. The designation of only one of the European Community States is deemed a designation of all the European Economic Community States. However, as a result of vigorous demands by the British, this provision was divested of its compulsory nature for a transitional period. *Id.* at 110. Thus, an applicant has a choice under Art. 86 of the Patents Act of 1977 not to obtain a Community patent but a European patent for the states designated. *Id.* at 110-11.

29. When formulating the prerequisite for patentability of inventions for the European Patent, the European Patent Convention closely followed the provisions of the Strasbourg Convention to ensure maximum possible harmonization between European law and the national patent law of the Convention member states. HAERTEL, *supra* note 27, at 6.

30. The European Patent Convention, *supra* note 27; the PCT, *supra* note 26; and the Community Patent Convention, *supra* note 28.

31. A patentee who secures a "European Patent" can request protection in any number of European "convention" countries he wishes; however, if he requests protection in the United Kingdom, he is subject to further "U.K." restrictions. *See infra* notes 35-41 and accompanying text. Presently, applicants—irrespective of their nationality, place of residence or principal place of business—can obtain a European Patent for 11 States covering a market of over 270 million inhabitants: Austria, Belgium, Federal Republic of Germany, France, Italy, Liechtenstein, Luxembourg, the Netherlands, Sweden, Switzerland and the United Kingdom. European Patent Office, *supra* note 26, at 4. These countries are the present members of the European Patent Organisation which was set up in 1977. European Patent Organization, *supra* note 26. Other countries are expected to join in due course. European Patent Office, *Protecting Inventions in Europe* (3d ed. 1981) (Information Brochure).

32. Vitoria, *supra* note 19, at 3. The Community Patent is directly incorporated into the British patent system by Section 86 of the Patents Act, 1977.

33. J. ELLIS, *PATENT ACT 1977* at 22 (1978) [hereinafter cited as ELLIS].

34. Patents Act, 1977, *supra* note 19, at § 132. For application of the Act to Northern Ireland, see § 131.

patentee is protected.³⁵ The European Patent Office grants this patent.³⁶ At the European office,³⁷ the patentee can request patent protection in any number of European "convention" countries.³⁸ The European Patent Convention sets forth the rules and procedures the European Patent Office must follow in granting a European Patent (U.K.).³⁹ Once the European Patent is granted, it becomes effective in the designated countries and is subject to revocation only by those countries.⁴⁰ When the patents become effective in the United Kingdom, they are subject to the laws promulgated by the Patents Act, 1977. From this time forward the Act controls the patent.⁴¹

The author anticipates that, in the near future, a patentee from the United Kingdom or from a European convention country will be able to obtain a Community Patent which will afford him patent protection throughout the Common Market area including the United Kingdom.⁴² This patent should appear sometime in the middle 1980's.⁴³ The Community Patent Convention specifies the rules and procedures for granting such a patent, but it has not yet been put into force.⁴⁴

Part I of the Patents Act, 1977 defines the new British patent law that governs the domestic patent.⁴⁵ The British Parliament

35. ELLIS, *supra* note 33, at 22.

36. *Id.* The European Patent Office grants a single European patent for all the designated Contracting States on the basis of a single patent application, in a single language, in a single procedure. In each State, such a patent confers the same rights. European Patent Office, *supra* note 26, at 4. The Patent Office grant proceedings include filing the patent application, examination on filing and formalities examination, search, publication of the application and search report, substantive examination with grant of patent or refusal of application, and possible opposition proceedings. *Id.* at 7. As a general rule, this procedure makes no greater demand on an applicant than national examination procedures. *Id.*

37. The European Patent Office opened in Munich on November 1, 1977. It began accepting European patent applications on June 1, 1978 and granted the first European Patent on January 9, 1980. European Patent Office, *supra* note 26, at 2.

38. R. BOWEN, *supra* note 24, at 10.

39. For a general guide on procedures to obtain a European Patent, see generally European Patent Office, *How to Get a European Patent: Guide for Applicants* (5th ed. 1982) (Information Brochure).

40. Vitoria, *Patentability and Validity* in PATENTS ACT 1977: QUEEN MARY COLLEGE PATENT CONFERENCE PAPERS 59 (1978) [hereinafter cited as *Patentability and Validity*]. Article 138 of the Convention prescribes the grounds for revocation of a European Patent. Section 72(1) of the Patents Act, 1977 sets forth the grounds for revocation in the British system.

41. *Id.* at 59.

42. SINGER, *supra* note 28.

43. *Id.* at 105.

44. See generally Community Patent Convention, *supra* note 28.

45. *Changing Patent Scene*, *supra* note 1, at 10; see also W. CORNISH, *INTELLECTUAL*

drafted Part I of the Patent Act to correspond with the rules and procedures that govern the European Patent and Community Patent.⁴⁶ Some of the provisions in Part I are identical to the European Convention and Community Patent Convention provisions, while others are very similar to the Convention language.⁴⁷ When Parliament drafted these sections, its intent was to conform the British domestic patent with the other two so that a patentee would acquire no advantage by obtaining one type of patent versus another type.⁴⁸

Part II of the Patents Act, 1977 was designed to assimilate the European Patent and Community Patent into the British patent system so they could all be uniformly treated by the British patent office and courts. Part II also satisfies the British treaty obligations.⁴⁹ As required by Articles 2 and 64 of the European Patent Convention, section 77 of the Patents Act, 1977 requires that the European Patent be treated as if it had been granted under the British Act.⁵⁰ Section 130(7) is the key provision designed to align the three patent systems. This section states that all parts of the Patents Act, 1977 are intended to set the same standard as the European Patent Convention, the Community Patent Convention, and the Patent Cooperation Treaty.⁵¹

Because the Patents Act, 1977 deals with three types of patents, it is highly technical. This Act has the dubious distinction of having had the highest number of amendments tabled against it than any other British Act in modern times, having over 250 amendments in the House of Commons and 700 in the House of Lords.⁵² The British Court and Patent Office are presently interpreting these statutory provisions.⁵³ Despite its complexity, however, the new system, in

PROPERTY: PATENTS, COPYRIGHT, TRADEMARK AND ALLIED RIGHTS 101 (1981) [hereinafter cited as CORNISH].

46. *Changing Patent Scene*, *supra* note 1, at 15.

47. Ellis, *Terminology Differences Between the Patents Act 1977 and the European Community Patents Convention* in PATENTS ACT 1977: QUEEN MARY COLLEGE PATENT CONFERENCE PAPERS 24 (M. Vitoria ed. 1978) [hereinafter cited as *Terminology Differences*].

48. *Id.* at 22.

49. *Changing Patent Scene*, *supra* note 1, at 13-14; see also CORNISH, *supra* note 45, at 102.

50. Patents Act, 1977, *supra* note 19, at § 77.

51. *Id.* at § 130(7); see *Terminology Differences*, *supra* note 47, at 24-25.

52. Note, *Patents Act 1977*, 41 MOD. L. REV. 324, 324 (1978).

53. Opinions will be given by the Court of Justice of the European Communities at Luxembourg on the meaning of the Community Patent Convention provisions and the European Patent Convention provisions which relate to it. These interpretations will give guidance to the British courts in interpreting the parallel provisions of the Patents Act, 1977. Patents Act, 1977, *supra* note 19, at § 87. Section 91 of the Act requires the British Patent

practice, fosters invention. Since the system has made it easier for the patentee to obtain international protection, the inventor receives an increased benefit from his invention and thus experiences a greater stimulus to invent. The patent offices of the European countries should receive fewer patent applications, thus decreasing their patent application burden. They will be able to process their applications quicker and expedite public access to the technology.

PART III: EMPLOYER-EMPLOYEE INVENTIONS

Statistics show that a significant portion of the creative and inventive work in the technical area stems from the employed inventor.⁵⁴ To maximize the innovation process, the patent rights derived from an employee's invention must be divided between the employer and employee. United States statutory patent law contains no provisions allocating patent rights to an invention between the employer and the employee. Common law doctrine dictates who shall receive the patent rights. It distinguishes three situations. First, where the employee is hired to invent or is assigned the task of developing a specific device or process, common law provides that the employee assign his invention to the employer.⁵⁵ The rationale is that the employer has paid for the invention, and therefore, he should be allowed to keep it.⁵⁶ This rule applies only to those inventions in the field for which the employee was actually hired, and not to inventions he may make in other fields.⁵⁷ Secondly, at the other extreme, where the employee has not been hired to invent and has made an invention during his own time without using the employer's resources, the invention belongs to the employee. In the latter situation, the employee must obtain the patent at his own expense. This rule applies whether or not the invention relates to the employer's business.⁵⁸ Third, there is a middle ground called the

Office and courts to take judicial notice of the decisions of the Court of Justice of the European Communities.

54. NUEMEYER, *supra* note 3, at 30.

55. *Id.* at 41. *See, e.g.*, *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 187 (1933) (dictum); *Standard Parts Co. v. Peck*, 264 U.S. 52, 58-60 (1924); *Solomons v. United States*, 137 U.S. 342, 346 (1890). *See generally* 4 WALKER ON PATENTS § 378, at 491-93 (A. Deller 2d ed. 1965) (general discussion of invention ownership rights where employee is hired for an express purpose, and implied assignment) [hereinafter WALKER ON PATENTS].

56. *Forgotten Purpose*, *supra* note 6, at 138; *see, e.g.*, *Standard Parts Co. v. Peck*, 264 U.S. 52, 59-60 (1924); *Solomons v. United States*, 137 U.S. 342, 346 (1890).

57. NUEMEYER, *supra* note 3, at 41.

58. *Id.*; *Forgotten Purpose*, *supra* note 6, at 138. *See, e.g.*, *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 188-89 (1933) (by inference); *Tripp v. United States*, 406

"shop right" doctrine. This doctrine applies where the employee is not hired to invent, but uses the employer's facilities and resources to make an invention. Here, common law splits the invention rights between the employer and the employee. The invention belongs to the employee. He has the right to grant licenses and collect royalties from the patent. The employer obtains a nonexclusive, nontransferable, royalty-free license to make and use the invention.⁵⁹

The common law rights can be superseded by contract. A patent right has attributes of personal property and, therefore, can be assigned to any legal person.⁶⁰ The inventor has the right to give away or sell prospective patent rights to his inventions even before they are conceived.⁶¹ As a result, most employers require as part of their employment contracts, an invention assignment agreement in which the employee agrees to assign all rights to his inventions to the employer.⁶² These employment agreements, now standard form contracts,⁶³ can contract away an employee's invention which is:

- (1) made entirely during his own time;
- (2) made with the employee's own resources;
- (3) totally unrelated to the field for which the employee was hired to work;
- (4) made prior to the date employment commences; and
- (5) made within a reasonable period after employment is terminated.⁶⁴

Today, these contracts have, to a large extent, rendered moot

F.2d 1066, 1069-70 (Ct. Cl. 1969); *Aero Bolt & Screw Co. v. Iaia*, 180 Cal. App. 2d 728, 736-37 & 739, 5 Cal. Rptr. 53, 56-60 (1960). See generally WALKER ON PATENTS *supra* note 55 § 378, at 484-98 (general discussion of employer-employee invention ownership rights).

59. NUEMEYER, *supra* note 3, at 41; *Forgotten Purpose*, *supra* note 6, at 139. See, e.g., *Dublier*, 289 U.S. at 188-89; *Solomons*, 137 U.S. at 346-48. See generally WALKER ON PATENTS, *supra* note 55, § 378, at 507-20 (general discussion of shop right or implied license); J. COSTA, LAW OF INVENTING IN EMPLOYMENT 9-18, 20 (1953) [hereinafter cited as COSTA]; Bishop, *Employers, Employees and Inventions*, 31 S. CAL. L. REV. 38, 48-49 (1957).

60. 35 U.S.C. § 261 (Supp. 1982).

61. *Forgotten Purpose*, *supra* note 6, at 134.

62. See NUEMEYER, *supra* note 3, at 43.

63. *Forgotten Purpose*, *supra* note 6, at 141.

64. NUEMEYER, *supra* note 3, at 44. See generally COSTA, *supra* note 59, at 116-25. In 1979, the California State Legislature added Labor Code sections 2870, 2871, and 2872 which limit invention assignment provisions in employment contracts by providing that any provision in an employment agreement that requires an employee to assign any of his rights in an invention to his employer are generally inapplicable, when certain conditions are met, to an invention that was developed on the employee's own time and for which various employer resources were not used. Contrary provisions in the employment agreements are void and unenforceable. CAL. LAB. CODE §§ 2870-72 (West Supp. 1982).

the common law rules which protected the employee's invention.⁶⁵ Almost all employees who are hired by industry and possess scientific or technical credentials routinely sign these agreements. Since the employee rarely has significant bargaining power, these invention assignment provisions are usually not negotiated.⁶⁶

Though the courts can strike down these invention assignment provisions, they have rarely done so. Of course, courts have stricken other types of "one-sided" contractual provisions to foster important public policies;⁶⁷ however, "unconscionability" has not been extended to this area.⁶⁸ It may be argued that since the employee assignment provisions take away the inventor's incentive to create and because there is a strong public policy to promote invention,⁶⁹ the contract provisions are contrary to public policy and could therefore be stricken or, at least, limited.⁷⁰

Without new congressional legislation regulating employer-employee patent rights, the present situation will probably continue indefinitely. The valued right which an inventor possesses is easily taken from him when he becomes an employee. The employer typically acquires all the benefits of the patent, and none flow to the employee. To maximize the flow of new technology to the public, it is important that United States patent law create incentives for both the inventor and the employer.

The British patent law system is quite different. Prior to the Patents Act, 1977, the United Kingdom had no statutory law gov-

65. NUEMEYER, *supra* note 3, at 89, 201; Orkin, *The Legal Rights of the Employed Inventor: New Approaches to Old Problems*, 56 J. PAT. OFF. SOC'Y 648, 651 (1974) (citing Rines, *A Plea for a Proper Balance of Propriety Rights*, IEEE SPECTRUM (April 1970) at 43. See also *Forgotten Purpose*, *supra* note 6, at 142.

66. NUEMEYER, *supra* note 3, at 46.

67. *Henningsen v. Bloomfield, Inc.*, 32 N.J. 358, 403-04, 161 A.2d 69, 95 (1960) (standard contract disclaiming warranties struck down because public policy to protect those without bargaining power against automobiles which are inherently dangerous).

68. See *Forgotten Purpose*, *supra* note 6, at 144-46.

69. See *supra* notes 6-11 and accompanying text. Cases have stressed the importance of rewarding the individual inventor. See *Mazer v. Stein*, 347 U.S. 201, 219 (1947) which states "[t]he economic philosophy behind the clause empowering Congress to grant patents and copyright is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in 'Sciences and useful Arts'. Sacrificial days devoted to such creative activity deserves rewards commensurate with the services rendered." *Id.*

70. See *Forgotten Purpose*, *supra* note 6, at 147-48; NUEMEYER, *supra* note 3, at 46 ("There is some evidence . . . that contracts of the sort here described fall considerably short of providing the kind of stimulus and incentive to the employee that is contemplated and sought in the public interest."). *Id.*

erning employee inventions.⁷¹ As in the United States, the British employer could contract for the rights to the employee's invention. If the employment contract lacked an employee invention assignment provision, the British common law rules applied.⁷² In the Patents Act, 1977, the British Parliament balances the employer and employee patent rights by promulgating a series of provisions specifying their respective rights to inventions.⁷³

Section 39 of the Act defines two circumstances wherein an invention will belong to the employer. First an employer will own an invention that an employee makes in the course of his normal duties if the employee is reasonably expected to make this type of invention while carrying out his duties.⁷⁴ This provision generally applies to inventions made by a scientist or engineer who is specifically employed to do research and development.⁷⁵ Second, an employer will own an invention made by an employee in the course of his duties where the employee has a special contract obligation to further the employer's business interest.⁷⁶ This provision generally applies to the managerial type employee.⁷⁷ All other inventions not falling into these two categories belong to the employee.⁷⁸ These include: (1) inventions made by the scientist or engineer working outside the scope of his normal or specifically assigned duties, (2) inventions made by the employee who is not employed as either a scientist or manager, and (3) inventions made by the shop employee within the scope of his normal duties.⁷⁹

Even though the employer owns the invention, the employee inventor will obtain a monetary interest in it.⁸⁰ Section 40 of the Patents Act, 1977 introduces a monetary award scheme in British patent law. Where the employee's invention is of outstanding benefit to the employer, the employee is entitled to compensation.⁸¹ The

71. The Patents Act, 1949, *supra* note 20, contained no provisions allocating employer-employee rights to an employee's invention.

72. Michaels, *supra* note 1, at 675.

73. Patents Act, 1977, *supra* note 19, at §§ 39-42.

74. *Id.* at § 39(1)(a).

75. Reid, *Employee Invention Under the Patents Act 1977*, 23 J. Bus. L. 350, 350 (1979).

76. Patents Act, 1977, *supra* note 19, at § 39(1)(b).

77. Reid, *supra* note 75, at 351.

78. Patents Act, 1977, *supra* note 19, at § 39(2).

79. Reid, *supra* note 75, at 351.

80. *See generally* Patents Act, 1977, *supra* note 19, at §§ 40, 41 (compensation to employee's on inventions that belong to the employer per the mandate of sections 39(1)(a), (b)).

81. Patents Act, 1977, *supra* note 19, at § 40(1).

test of outstanding benefit is not based on whether the invention is outstanding in merit as a scientific achievement. Rather, it is based on the amount of money the employer gets from the invention's commercial exploitation.⁸² Where there is an outstanding benefit derived by the employer, Section 41 defines the guidelines the patent office comptroller or patent courts should consider in determining the employee's "fair share."⁸³ These include the employee's duties, his salary, the efforts and skill devoted to making the invention, the assistance afforded the inventor by the employer and by others, and the amount of benefits the employee has already received from the invention.⁸⁴

In situations where the employee assigns or exclusively licenses his patented invention to his employer, the employee is entitled to additional compensation from his employer.⁸⁵ However, the employee can only claim additional compensation if the employee's compensation has been inadequate in relation to the benefit obtained by his employer from the invention.⁸⁶ In assessing the employee's compensation, the factors considered include the contribution made by other coinventors and those made by the employer.⁸⁷

To protect the employee's right to compensation, the British Parliament promulgated several statutory provisions prohibiting employers from varying employee compensation rights by contract. Where the employee assigns his invention to the employer, Section 40 mandates that the employee's entitlement to compensation cannot be altered by the assignment grant provision or by any ancillary contract.⁸⁸ Section 42 sets forth a strong policy limiting invention provisions in employer-employee contracts, stating that an employee's rights in an invention or patent may not be diminished by a term in a contract made before the invention is realized.⁸⁹ This protection is limited to pre-invention contracts; post-invention contracts are not as severely restricted by this section. However, it could be argued that Section 42 was intended to encompass this post-inven-

82. Reid, *supra* note 75, at 354.

83. Patents Act, 1977, *supra* note 19, at § 41.

84. *Id.* at § 41(4) (employee's fair share where invention belongs to employer).

85. *Id.* at § 41(2) (governing inventions that belong to the employer).

86. Reid, *supra* note 75, at 355.

87. Patents Act, 1977, *supra* note 19, at § 41(5) (employee's fair share where invention belongs to employer).

88. *Id.* at § 40(4).

89. *Id.* at § 42(2).

tion type of contract as well.⁹⁰ Section 42 also prohibits the employer from obtaining rights to his employee's invention through third parties such as when an agreement between an employee and a third party is arranged by an employer as a device to avoid paying employee compensation.⁹¹

The employee can, nevertheless, avoid the employer-employee statutory scheme by using collective agreements. Under Section 40 of the Patents Act, 1977, a collective agreement made between the employee's trade union and an employer will control. However, the agreement must be consummated before the invention is made.⁹² The collective agreement will be valid even though it does not give the employee as much compensation for the invention as the statutory compensation might.⁹³

As a corollary, it should be noted that those employee inventions which do not fall within the new employer-employee statutory provisions will be dealt with under the established rules of the English common law. However, such cases will be unusual.⁹⁴

Today, the process of innovation is dichotomized between the inventor and industry. The individual is no longer responsible for the entire innovation process.⁹⁵ The inventor's main role occurs at the beginning of the process. He is responsible for the initial idea or mental conception of the new invention.⁹⁶ After this, the inventor's role diminishes and that of industry (his employer) has greater importance. Industry takes the inventor's creative idea, subjects it to research and development, and turns out a product marketable to the public. In order to expedite the flow of technology to the public, a patent law system must provide incentives for the inventor as well as for the employer.⁹⁷ Thus, it is necessary to strike a balance between and adequately compensate both from the benefits derived from the patent. The United States patent system fails to strike such a balance. The employer or industry can easily contract away the

90. Cornish, *Employee's Inventions* in PATENTS ACT 1977: QUEEN MARY COLLEGE PATENT CONFERENCE PAPERS 87 (M. Vitoria ed. 1978) [hereinafter cited as *Employee's Inventions*].

91. *Id.* at 82.

92. Patents Act, 1977, *supra* note 19, at §§ 40(3) & (6).

93. *Employee's Inventions*, *supra* note 90, at 83-84.

94. *Id.* at 82.

95. *Forgotten Purpose*, *supra* note 6, at 132, 168.

96. *Id.* at 169.

97. Udell, *Stimulating Non-Corporate Industrial Innovation: Experiences of an Experimental Innovation Center*, 61 J. PAT. OFF. SOC'Y 44, 46-47 (1979).

employee's patent rights. The employee does not have the strong bargaining power necessary to retain his rights. Thus, the patentee's exclusive right as created by the United States Congress under the authority of the United States Constitution goes not to the patentee, but to the employer of the patentee under contract law. The employee retains virtually no rights to his invention.

The British Parliament, by contrast, has instituted a system which distributes the benefits to be derived from a patent in a more equitable manner. Both the employee and the employer are protected under the Patents Act, 1977. The United States may watch the British model during the next decade as the provisions of the British Act are implemented and tested by the British Patent Office and courts. The United States' interest in promoting inventions should necessarily entail statutory protection for the source of all invention: the inventor himself.

PART IV

A. Priority of Invention: First to Invent v. First to File

For each invention only one patent is issued. The United States and Britain use different systems to determine which inventor is entitled to the one patent. The United States is one of the few nations which use the first-to-invent system. Only the "first inventor" who made the invention can obtain a patent. This inventor has "priority of invention."⁹⁸ Justice Cardozo summarized this principle stating, "[t]he prize of an exclusive patent falls on the one who had the fortune to be first The others gain nothing for all their toil and talents."⁹⁹

To determine when an invention is made and which inventor has priority of invention, the Patent Office and federal courts have enunciated the concepts of conception, reduction to practice, and diligence. An invention occurs when a "conception" and a "reduction to practice" have taken place.¹⁰⁰ Conception is the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention.¹⁰¹ Mere recognition of a desired

98. 35 U.S.C. § 102 (1976). The party deemed the first inventor can exclude all others from making and using the invention, even a prior user. *Griffin v. Keystone Mushrooms Farm Inc.*, 453 F. Supp. 1283, 1285 (E.D. Pa. 1978).

99. *Radio Corp. of America v. Radio Eng'g Laboratories Inc.*, 293 U.S. 1, 3 (1934).

100. See generally P. ROSENBERG, *PATENT LAW FUNDAMENTALS* 136-41 (1975) [hereinafter cited as ROSENBERG].

101. *Townsend v. Smith*, 36 F.2d 292, 295 (C.C.P.A. 1929).

result or the conception of a general approach to solving a problem is not sufficient to constitute conception.¹⁰² The inventor must actually form the physical structure in his mind and the means to accomplish it.¹⁰³ The date of the inventor's "conception is the date on which the invention is made sufficiently plain to enable persons skilled in the art to understand it."¹⁰⁴

An invention, once conceived, is not completed until it has been reduced to practice.¹⁰⁵ Reduction to practice can be either an actual reduction to practice or a constructive reduction to practice. Actual reduction to practice involves the physical construction or carrying out of the invention. It contemplates actual and complete use of the invention for its intended purpose.¹⁰⁶ To constitute actual reduction to practice, the invention need not be perfect or incapable of further improvements.¹⁰⁷ Furthermore, a single use of the invention is sufficient.¹⁰⁸ However, actual reduction to practice requires that the invention be manufactured with every element that it needs to function as intended.¹⁰⁹ Depending on the complexity of the invention, it may need to be tested before there will be a complete reduction to practice. Simple devices do not require testing; construction is sufficient.¹¹⁰ A device of moderate complexity must be tested, but only to the extent that the invention's practical utility for its intended purpose has been demonstrated to reasonable satisfaction.¹¹¹ A complex invention must be subject to testing under actual working conditions in the environment in which it was designed to function.¹¹² Reduction to practice can also be satisfied by a constructive reduction to practice. Constructive reduction to practice is satisfied by the filing of the patent application. The date of the reduction to practice is the filing date.¹¹³

The problem of priority of invention arises where two or more

102. *Id.*

103. *Id.* at 295. The requirements of extensive subsequent research to complete the invention will negate an earlier asserted date of conception. *Bell Tel. Laboratories, Inc. v. Hughes Aircraft Co.*, 191 U.S.P.Q. 23, 29 (D. Del. 1976).

104. *Townsend v. Smith*, 36 F.2d 292, 295 (C.C.P.A. 1929).

105. *Breuer v. DeMarinis*, 558 F.2d 22, 27-28 (C.C.P.A. 1977).

106. *Farmland v. Lahman Mfg.*, 192 U.S.P.Q. 749, 756 (D. S.D. 1976).

107. *Cochran v. Kresock*, 530 F.2d 385, 391 (C.C.P.A. 1976), *aff'd* 568 F.2d 112 (1978).

108. *Bech v. Teague*, 534 F.2d 300, 305 (C.C.P.A. 1976).

109. *Meitzner v. Corte*, 537 F.2d 524, 530 (C.C.P.A. 1976).

110. *Bennett v. Fitzgerald*, 48 F.2d 917, 919 (C.C.P.A. 1931).

111. *Id.*

112. *Chandler v. Mock*, 150 F.2d 563, 565 (C.C.P.A. 1945).

113. *Farrington v. Mikeska*, 155 F.2d 412, 414 (C.C.P.A. 1946).

inventors independently make the same invention. Generally, priority of invention belongs to the inventor who reduces his invention to practice first, either actually or constructively.¹¹⁴ This inventor is called the senior party.¹¹⁵ To defeat the senior party's right to the patent, the challenging inventor or junior party must establish that he conceived of the invention before the senior party and that he exercised continued "diligence" in reducing his invention to practice.¹¹⁶ Diligence requires a continuous active effort by the inventor or his representatives to reduce the invention to practice.¹¹⁷ Any break will forfeit the junior party's claim to priority of invention based on his earlier conception.¹¹⁸ The junior party's diligence must commence before the senior party's conception.¹¹⁹ The standard for "diligence" set by the United States Supreme Court is reasonable diligence.¹²⁰ The burden of proof is on the junior party to account for *what* was done and *when* it was done for the entire period during which diligence is required.¹²¹

The British use the first-to-file system to determine priority of invention. The inventor's priority date is the date that he files his patent application.¹²² The British system is not concerned with who first conceived and reduced the invention to practice, but rather it depends upon which person filed the patent application first. There are some special claiming rules that can give the inventor an earlier filing date than that of the application in question. The applicant may claim priority by pointing to an application he filed earlier but

114. *Christie v. Seybold*, 55 F. 69, 76 (1893); ROSENBERG, *supra* note 100, at 143.

115. ROSENBERG, *supra* note 100, at 143-44.

116. *Laas v. Scott*, 161 F. 122, 126 (E.D. Wis. 1908); *Christie v. Seybold*, 55 F. 69, 76 (6th Cir. 1893). "When the inventor who is the first to conceive is also the first to reduce to practice within the statutory period, he is clearly entitled to priority, although a junior inventor may anticipate him by an earlier application at the patent office and may have secured letters of patent. *Laas*, 161 F. at 127; *See also Christie*, 55 F. at 75; *National Cash-Register v. Lamson Consol. Store Serv. Co.*, 60 F. 603, 604 (2d Cir. N.Y. 1894); *Coffin v. Ogden*, 85 U.S. (18 Wall.) 120, 124-25 (1873); *Agawan Co. v. Jordon*, 74 U.S. (7 Wall.) 582, 602 (1868).

117. *Naber v. Cricchi*, 567 F.2d 382, 385 (C.C.P.A. 1977).

118. *See Gould v. Schawlow*, 363 F.2d 908, 920-21 (1966); *Laas v. Scott*, 16 F. 122, 126 (E.D. Wis. 1908).

119. *Hull v. Davenport*, 90 F.2d 103, 105 (C.C.P.A. 1937); *Wilson v. Sherts*, 81 F.2d 755, 762 (C.C.P.A. 1936); *Christie v. Seybold*, 55 F. 67, 69 (6th Cir. 1893).

120. *See Gould v. Schawlow*, 363 F.2d 908, 921 (C.C.P.A. 1966); *Automatic Weighing Mach. v. Pneumatics Scale Corp.* 166 F. 288, 298 (1909).

121. *See Gould v. Schawlow*, 363 F.2d 908, 919 (C.C.P.A. 1966). "Evidence of diligence during the critical period may be shown by either affirmative acts of acceptable excuses or reasons for failure of action." *Hull v. Davenport*, 90 F.2d 103, 105 (C.C.P.A. 1937); *see also Christensen v. Ellis*, 17 App. D.C. 498, 501 (1901).

122. Patents Act, 1977, *supra* note 19, at § 5(1).

not more than twelve months immediately preceding the present application.¹²³ The earlier date may be based on a British domestic patent application or an application filed in a convention country.¹²⁴ If the prospective patentee has more than one previously filed application, he must specify which earlier application he is referring to.¹²⁵ The previous application must disclose the same "matter" as claimed in the present application.¹²⁶ This prevents one from gaining priority for developments and additions which are based on the earlier application and thus limits the scope of an exclusive right.

Contrasting the United States and British systems, both have advantages and disadvantages. The United States' "first-to-invent" system is complex. Priority is based on three terms of art: conception, reduction to practice and diligence. Proof of each concept depends heavily on the facts of each case. The patent attorney must consult with engineers, physicists, managers, and other technical people to develop these facts. Professional time is very costly; therefore, a contest between rival inventors presents a large burden for an inventor. Furthermore, this process delays the issue of the patent which in turn delays disclosure of the invention to the public.

Moreover, the United States patentee does not know if his patent is strong enough to withstand challenge until it is contested by a rival inventor. The patentee may be uncertain for years until the issue of priority is brought before the courts. Industry will not invest time and money into a product before it has a high degree of certainty that it will have an exclusive right to make the product. Thus, flow of technologically advanced products to the public is hindered.

In the British "first-to-file" system,¹²⁷ priority can easily be ascertained by looking to the filing date of applications on the invention in question. No special terms are created to define priority as in the United States' system. This first-to-file system eliminates the uncertainties, delays, and great expense incurred when two or more inventors contest priority on the basis of the date of conception of the invention. The British system speeds up the identification and

123. *Id.* at § 5(2).

124. *Id.* at § 5(5)(a), (b).

125. *Patentability and Validity*, *supra* note 40, 56-57.

126. Patent Act, 1977, *supra* note 19, at § 5(2)(a), (b).

127. The United States Congress has considered implementing a first-to-invent system in which the question of priority for an invention would be determined by the earliest filing date. See H.R. 5924, 90th Cong., 1st Sess. (1967).

filing of the inventor and thus expedites disclosure of inventions to the public.

The British, however, by basing priority of invention on the patentee's filing date, have invited inventors to file a plethora of patent applications based on untried and incomplete inventions hoping one application will yield a successful invention. Prior construction of testing are not encouraged as in the United States system which considers such conduct as initiating the process of obtaining a patent.

The United States system intends to reward the exclusive right to the inventor who invented first in time—the first person to conceive the invention. The British system rewards the first inventor who files with no regard to who may have been the first.

B. Patent Filing Procedures: Getting Through the Patent Office

To obtain a British domestic patent, an inventor must file a "patent" application with the British Patent Office, which includes: (a) a request for the grant of a patent in the prescribed form, (b) a specification containing a full description of the invention, (c) claims, which indicate the scope of the monopoly protection sought, (d) any drawings that may be necessary, and (e) an abstract outlining the technical features of the invention.¹²⁸ The applicant must pay a 64 pound fee with his application.¹²⁹ To fulfill these application requirements is expensive and time consuming. These requirements may delay the individual inventor from making a timely filing. Since the British system bases priority of invention on the inventor's date of filing, the individual inventor must file quickly to beat competing inventors. The Patents Act, 1977 has relaxed the filing requirements so that the individual inventor can file at the earliest possible date. Section 15 of the Act allows the inventor to establish a priority date by filing a description of the invention¹³⁰ and paying a partial application fee of seven pounds.¹³¹ Thereafter, the applicant has twelve months to complete the remaining filing requirements.¹³² During that time, the individual inventor can find

128. Patents Act, 1977, *supra* note 19, at § 14.

129. Patents Rules, 1978, rule 3 (Schedule 1, Part A, List of Fees Payable). This payment includes the filing fee and for preliminary examination and search.

130. *Id.* at § 15(1).

131. Patents Rules, 1978, rule 36 (Schedule 1, Part A, List of Fees Payable). The filing fee is payable on request for the grant of a patent.

132. *Id.* at rules 25(1), (2). The applicant must file at the Patent office one or more

a company or venture capitalist that will pay the expense of developing the applicant's abstract and claims, and pay the additional application fee. If the applicant does not complete the application within the twelve month period, his application will be considered withdrawn and he will lose the priority date established by his partial application.¹³³

Upon completion of the application, the British Patent Office Comptroller refers it to an examiner who makes a "preliminary examination."¹³⁴ The examiner analyzes the claims to ensure they are clear, concise, and support the description.¹³⁵ At this stage in the application process, the examiner can, in his discretion, research the technical literature and determine whether the invention is patentable.¹³⁶ Thus, nonpatentable inventions are eliminated early in the examination process.¹³⁷ The applicant receives the results of the preliminary examination when complete.¹³⁸ If the examiner finds the application to be defective, the applicant can file an amended application.¹³⁹

Once the patent application passes all the statutory requirements, the patent office should publish it within eighteen months after the application was filed or as soon as possible thereafter.¹⁴⁰ Publication under the new British system takes place much earlier than under the old system.¹⁴¹ Publication will disclose a description of the invention, the applicant's claims, abstracts, and the name of the inventor.¹⁴² The Comptroller must advertise in the Patent Office Journal that the application has been published and must give the

claims, an abstract, and make a request for preliminary examination, and pay a search fee of 57 pounds. Patents Act, 1977, *supra* note 19, at § 15(5); Patents Rules, 1978, rule 36 (Schedule 1, Part A, List of Fees Payable).

133. Patents Act, 1977, *supra* note 19, at § 15(5).

134. *Id.* at § 17(1).

135. *Id.* at §§ 17(2), 14(3), 14(5), 14(7).

136. *Id.* at §§ 17(4), 17(5). In his search the examiner determines whether the invention for which a patent is sought is new and involves an inventive step. *Id.* at § 17(4).

137. *Changing Patent Scene*, *supra* note 1, at 11. Limited contestation on patentability is available to dissenters (competing inventors). See Patents Act, 1977, *supra* note 19, at § 21.

138. Patents Act, 1977, *supra* note 19, at § 17(5).

139. Patents Act, 1977, *supra* note 19, at § 17(3).

140. *Id.* at § 16; Patents Rules, 1978, rule 27. Section 16 of Patents Act, 1977 permits the patent applicant to have his application published earlier, but he is under no obligation to do so. *Changing Patent Scene*, *supra* note 1, at 11.

141. *Changing Patent Scene*, *supra* note 1, at 11.

142. See Patents Act, 1977, *supra* note 19, at § 16.

publication date.¹⁴³ The date of first publication is important because it will be from this date that damages for infringement can be measured.¹⁴⁴

The applicant can prevent publication of his patent application. After he receives and considers the preliminary examination results, the applicant may decide to withdraw the application, and it will not be published.¹⁴⁵ However, he must inform the patent office before the technical preparation for publication is completed. By withdrawing his patent application, he can keep his ideas secret while he researches the invention more thoroughly.¹⁴⁶

Within six months after the preliminary examination results are disclosed, the applicant must request a "substantive examination"¹⁴⁷ and pay a fee of fifty-seven pounds to continue the application process.¹⁴⁸ During this time, he can consider the results of the preliminary examination report and decide whether it is worthwhile to proceed with the filing process and incur the additional cost.¹⁴⁹ The substantive examination involves a thorough search of the technical literature to determine if the invention is patentable.¹⁵⁰ If it is, a patent will be issued upon payment of another fee.¹⁵¹

In the United States, the patenting process begins with the filing of a patent application and payment of a fee of \$175.¹⁵² The application includes a written description, claims and drawings. The description must state in concise terms, the manner and process of making and using the invention so that any person skilled in the art can construct and use the invention. It must also set forth the best mode contemplated by the inventor for carrying out the invention at the time of filing.¹⁵³ The claims define the scope of patent protection. They inform third parties when and where they will be tres-

143. *Id.* at § 16.

144. *See id.* at § 69.

145. Patents Act, 1977, *supra* note 19, at § 16.

146. *Changing Patent Scene*, *supra* note 1, at 11.

147. Patents Act, 1977, *supra* note 19, at § 18; Patents Rules, 1978, rule 33(2).

148. Patents Rules, 1978, rule 36 (Schedule 1, Part A, List of Fees Payable) (fee on request for substantive examination).

149. *See Changing Patent Scene*, *supra* note 1, at 11.

150. Patents Act, 1977, *supra* note 19, at § 18(2).

151. *Id.* at § 18(4).

152. THUMANN, HOW TO PATENT WITHOUT A LAWYER 51 (1978) [hereinafter cited as THUMANN].

153. 35 U.S.C. § 112 (1976).

passing on the patentee's invention.¹⁵⁴

The application is assigned to an examining division of the patent office and then to a chief examiner in the division. First, the examiner determines whether the application contains a proper summary of the invention, a description and drawings in proper form.¹⁵⁵ Second, he investigates the prior patents and publications to determine whether the invention meets the requirements of patentability. If so, a patent will be issued. If the application does not meet the requirements, the patent office will send the patentee a patent office "action" which includes a list of the relevant patents and publications to which the patentee's invention has been compared and a list of the rejected claims.¹⁵⁶ The applicant has six months (usually shortened to three months) to reply to the patent office action. If the applicant decides the examiner is correct, he may revise his claims or include new claims. However, if the applicant believes the examiner is wrong, he can request reconsideration.¹⁵⁷ If the patent office issues a second action, it is generally considered final, and the applicant will have to pursue his patent claim in the courts or file another application with different claims.¹⁵⁸

The patent offices of the United States and the United Kingdom face a substantial backlog of patent applications. In both countries, approximately three years pass from application to the issuance of a patent. Fulfilling the application requirements is time consuming and expensive. Preparing a patent application takes three to six months and costs between \$2000 for a simple device to \$10,000 for a complex device. Rapid disclosure of inventions to the public is delayed at the filing stage. The British Parliament has streamlined its patent system by allowing for early search. Applications can be screened out early in the patent examination process, thus lightening the load on the patent office. The patent applications that proceed to substantive examination have a higher presumption of validity.¹⁵⁹

The British system also provides a means for the individual in-

154. *Armco Steel Corp. v. United States Steel Corp.*, 203 F. Supp. 654, 656-57 (W.D. Pa. 1962), *aff'd per curiam*, 316 F.2d 472 (3d Cir. 1963).

155. THUMANN, *supra* note 152, at 69-70.

156. *Id.* at 70.

157. *Id.* at 71. This is another method to amend claims and point out the supposed errors in the examiners action. *Id.*

158. *Id.* at 72.

159. See *Changing Patent Scene*, *supra* note 1, at 11.

ventor to file a timely patent application through its relaxation of the filing requirements. The individual inventor can secure an early priority date without putting forth a large initial expense. He will be able to compete with industrial inventors for patents who have unlimited funds to finance their patent applications, thus stimulating individual inventing efforts. Furthermore, since the time for publication of the British patent application has been shortened, disclosure of the inventor's advancements becomes available to the public much sooner. As a result, there should be a reduction in wasteful duplication of effort and expense in the search for new and better products.¹⁶⁰

C. Patent Term: A Key to Expediting Technology and Stimulating Inventing Incentives

In the United States, the patent term is seventeen years.¹⁶¹ This term runs from the date the patent is issued.¹⁶² Under the Patents Act, 1977, the British patent term is now twenty years.¹⁶³ The patent term, however, begins to run from the date the patent application is filed.¹⁶⁴

British patent law, by basing the patent term on the date of filing, encourages the applicant to process his application as quickly as possible.¹⁶⁵ Everyday the applicant delays the prosecution of his patent application shrinks his period for exclusive use.¹⁶⁶ This system also induces the applicant to present his invention claims to the patent office promptly. Thus, disclosure of inventions to the public is expedited.

The United States patent system, by basing its patent term on the date the patent is issued, promotes delay in the prosecution of the patent application by the applicant.¹⁶⁷ The inventor can take the

160. *Id.*

161. 35 U.S.C. § 154 (1976 & Supp. IV, 1980).

162. *Woodbridge v. United States*, 263 U.S. 50, 55 (1923).

163. Patents Act, 1977, *supra* note 19, at § 25(1). Under the Patents Act, 1949, the term was 16 years from the date of the patent. Patents Act, 1949, *supra* note 20, at § 22.

164. Patents Act, 1977, *supra* note 19, at § 25(1).

165. See *Hearings On Patent Law Reform*, *supra* note 18, at 179 (statement of Judge Rifkind, Co-chairman of the President's Commission on the Patent System).

166. See *id.* Prosecution of a patent application includes communications between the patentee and the patent office about claims, amending claims, filing continuing applications, and opposition proceedings.

167. REPORT ON THE PRESIDENT'S COMMISSION OF THE PATENT SYSTEM, TO PROMOTE THE PROGRESS OF USEFUL ARTS IN AN AGE OF EXPLODING TECHNOLOGY 33 (1977)

maximum amount of time the patent rules permit to prosecute his application without cutting into his monopoly period.¹⁶⁸ Furthermore, the applicant is not discouraged from filing patent applications on inventions that are speculative and that are of little immediate value.¹⁶⁹ Another effect is the filing of continuing application solely to delay the start of the patent term.¹⁷⁰ Rapid disclosure of inventions to the public is inhibited by the United States system. The United States Congress has recognized this and has considered changing the patent term to twenty years from date of filing, but has yet to implement this change.¹⁷¹

The patentee's period of exclusive use has been interpreted as the inventive incentive.¹⁷² The magnitude of the inventive incentive is directly proportional to the patent term. Under the British patent system, the patentee has up to three more years than the United States patentee to actually exploit his invention. However, the effective term of the two patent system may be approximately the same.¹⁷³

Presently, it can take up to two and one-half to three years to process a patent application.¹⁷⁴ During this period, the British inventor is not likely to exploit his invention by putting it into the mass production cycle, since he is not certain the patent office will grant him a patent.¹⁷⁵ This non-use period will cut into the British patentee's monopoly period. The British patentee may not begin to utilize his exclusive use period until three years after he has filed his application. Thus, unless he processes his application in less than three years, the inventive incentive in both the British and United States patent systems is the same.

Terje Gudmestad

reprinted in *Hearings on Patent Law Reform*, *supra* note 18, at 51 [hereinafter cited as REPORT ON THE PATENT SYSTEM].

168. See *Hearings on Patent Law Reform*, *supra* note 165, at 179 (statement of Judge Rifkind).

169. REPORT ON THE PATENT SYSTEM, *supra* note 167, at 33.

170. *Id.* at 33. Basing the patent term on the date of filing will discourage the use of this delay tactic since the term of the patent stemming from a continuing application would expire on the same day as one issued on its application. *Id.* at 34.

171. *Id.* at 34.

172. CORNISH, *supra* note 45, at 99.

173. See *Hearings on Patent Law Reform*, *supra* note 18, at 165 (by analogy).

174. *Id.*

175. Udell, *supra* note 97, at 47.